

SEQUENCE LISTING

<110> LU, YI
LI, JING

<120> NUCLEIC ACID ENZYME BIOSENSORS FOR IONS

<130> 10322/6

<140> Divisional of 09/605,558

<160> 84

<170> PatentIn Ver. 2.1

<210> 1

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Trans-cleaving
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33

<210> 2

<211> 20

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic chimeric
substrate

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic chimeric
substrate

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actcactata ggaagagatg

20

<210> 3

<211> 15

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<223> Description of Artificial Sequence: Primer

<400> 3

gtgccaagct taccg

15

<210> 4
 <211> 43
 <212> DNA
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 <223> Description of Artificial Sequence: Primer

 <400> 4
 ctgcagaatt ctaatacgac tcactatagg aagagatggc gac 43

 <210> 5
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

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 <400> 5
 gggacgaatt ctaatacgac tcactata 28

 <210> 6
 <211> 97
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 <223> Description of Artificial Sequence: DNA Template

 <220>
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 <222> (20)..(59)
 <223> variable nucleotides

 <400> 6
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 <223> Description of Artificial Sequence: Variant of
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<210> 8

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zn-DNA

<220>

<221> modified_base

<222> (2)..(4)

<223> variable base complementary to positions 8-10

<220>

<221> modified_base

<222> (8)..(10)

<223> variable base complementary to positions 2-4

<400> 8

tnnnagcnnn tcgaaatagt

20

<210> 9

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Zn-DNA

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<221> modified_base

<222> (2)..(4)

<223> variable base complementary to positions 8-10

<220>

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<222> (8)..(10)

<223> variable base complementary to positions 2-4

<400> 9

tnnnagcnnn acgaa

15

<210> 10

<211> 15

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Class II
Co-DNA

<400> 10

acccaagaag ggggtg 15

<210> 11
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<210> 12
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substrate

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substrate

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<220>
<223> Description of Artificial Sequence: Zn-DNA

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<212> DNA
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<220>
<223> Description of Artificial Sequence: Zn-DNA

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agccatagtt ctaccagcgg ttcgaaatag tgaagtgttc gtgactatc 49

<210> 16
<211> 49
<212> DNA
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<220>
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<400> 16
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<210> 17
<211> 51
<212> DNA
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<400> 17
gccagattag ttctaccagc gggtcgaaat agtgaaatgt tcgtgactat c 51

<210> 18
<211> 50
<212> DNA
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<223> Description of Artificial Sequence: Zn-DNA

<400> 18
atctccaaag atgccagcat gctattctcc gagccggtcg aaatagtgac 50

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Zn-DNA

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<210> 20

<211> 50

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Zn-DNA

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<211> 50

<212> DNA

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<223> Description of Artificial Sequence: Zn-DNA

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<210> 22

<211> 50

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Zn-DNA

<400> 22

atctcaggtg ttggctgctc tcgcggtggc gagaggtagg gtgatgtgac 50

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<211> 14

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<223> Description of Artificial Sequence: Zn-DNA

<400> 23

ggtaagcttg gcac 14

<210> 24
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 <400> 27
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 <210> 28
 <211> 49
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atctcttgta ttagctacac tgtagtggg aacgttatca ttcggtgac 49

<210> 29

<211> 45

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Co-DNA

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atctcttgac ccaagaagggtgtgtcaatct aatccgtcaa ccatg 45

<210> 30

<211> 45

<212> DNA

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<223> Description of Artificial Sequence: Co-DNA

<400> 30

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<210> 31

<211> 54

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Co-DNA

<400> 31

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<210> 32

<211> 52

<212> DNA

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<223> Description of Artificial Sequence: Co-DNA

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<211> 50

<212> DNA

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<210> 34

<211> 50

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Co-DNA

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atctcaggtg ttggcatctc ccgcggtggc gagaggtagg gtgatgtgac 50

<210> 35

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Co-DNA

<400> 35

atctcaggtg ttggctgctc tcgcggtggc gagaggtagg gtcattgtgac 50

<210> 36

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Co-DNA

<400> 36

atctcgcagt cgaagcttca ctgttagtgc ggacgggtag acttcgtgac 50

<210> 37

<211> 50

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Co-DNA

<400> 37

atttcttctg aatcctcaat gttagtggac ctatgcgtag tcgatgtgac 50

<210> 38

<211> 50

<212> DNA
 <213> Artificial Sequence

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 <223> Description of Artificial Sequence: Co-DNA

 <400> 38
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 <210> 39
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Co-DNA

 <400> 39
 atctcgggtg tggctggata gagccggtag gccctatcgt aggggtgac 50

 <210> 40
 <211> 50
 <212> DNA
 <213> Artificial Sequence

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 <223> Description of Artificial Sequence: Co-DNA

 <400> 40
 gtctcttttg tccgcgactc gaaatagtgt gttgaagcag ctctagtgac 50

 <210> 41
 <211> 54
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Co-DNA

 <400> 41
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 <210> 42
 <211> 14
 <212> DNA
 <213> Artificial Sequence

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 <223> Description of Artificial Sequence: Co-DNA

 <400> 42
 ggtaagcttg gcac 14

<210> 43
 <211> 40
 <212> DNA
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 <223> Description of Artificial Sequence: Zn-DNA

 <400> 43
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 <210> 44
 <211> 40
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 <223> Description of Artificial Sequence: Zn-DNA

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 <210> 45
 <211> 40
 <212> DNA
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 <223> Description of Artificial Sequence: Zn-DNA

 <400> 45
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 <210> 46
 <211> 40
 <212> DNA
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 <223> Description of Artificial Sequence: Zn-DNA

 <400> 46
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 <210> 47
 <211> 40
 <212> DNA
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 <220>
 <223> Description of Artificial Sequence: Zn-DNA

<400> 47
ttttgtcagc gactcgaaat agagagtcga cacacctctc 40

<210> 48
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Zn-DNA

<400> 48
ttttgtcagc gactcgaaat agttagttga accagctctc 40

<210> 49
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Zn-DNA

<400> 49
ttttgtcagc gactcgaaat agtgagtaag aggagctatc 40

<210> 50
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Zn-DNA

<400> 50
ttttgtcagc gactcgaaat agtgagggga aacagctctc 40

<210> 51
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Zn-DNA

<400> 51
ttttgtcagc gactcgaaat agttagttga acacctctc 39

<210> 52
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Zn-DNA

 <400> 52
 ttttgtcagc gactcgaaat attgagttga agcagatctc 40

 <210> 53
 <211> 40
 <212> DNA
 <213> Artificial Sequence

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 <223> Description of Artificial Sequence: Zn-DNA

 <400> 53
 ttttgtcagc gacacgaaat agtgagttga ggcggcgctg 40

 <210> 54
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Zn-DNA

 <400> 54
 ttttgtcagc gacacgaaat agttagttga agaagctctt 40

 <210> 55
 <211> 40
 <212> DNA
 <213> Artificial Sequence

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 <223> Description of Artificial Sequence: Zn-DNA

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 <210> 56
 <211> 40
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 <400> 56
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<211> 40
 <212> DNA
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 <223> Description of Artificial Sequence: Zn-DNA

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 <211> 40
 <212> DNA
 <213> Artificial Sequence

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 <223> Description of Artificial Sequence: Zn-DNA

 <400> 58
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 <210> 59
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 <223> Description of Artificial Sequence: Zn-DNA

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 <210> 60
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 <223> Description of Artificial Sequence: Zn-DNA

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 <210> 61
 <211> 40
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 <223> Description of Artificial Sequence: Zn-DNA

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<210> 62
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 <212> DNA
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 <223> Description of Artificial Sequence: Zn-DNA

 <400> 62
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 <210> 63
 <211> 40
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 <400> 63
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 <210> 64
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 <212> DNA
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 <220>
 <223> Description of Artificial Sequence: Zn-DNA

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 <210> 65
 <211> 40
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 <223> Description of Artificial Sequence: Zn-DNA

 <400> 65
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 <210> 66
 <211> 40
 <212> DNA
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 <223> Description of Artificial Sequence: Zn-DNA

<400> 66
gtcagtcagg tactcgaaaa atagtgttca agccgctgtc 40

<210> 67
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<220>
<223> Description of Artificial Sequence: Zn-DNA

<400> 67
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<210> 68
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Zn-DNA

<400> 68
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<210> 69
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Zn-DNA

<400> 69
tattgtcagt gaccctaaaat agtatgttga agcagctctg 40

<210> 70
<211> 39
<212> DNA
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<223> Description of Artificial Sequence: Zn-DNA

<400> 70
ttttgtcagc tactgaaata gtgttttgaa gaagtcctg 39

<210> 71
<211> 15
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic chimeric
substrate

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic chimeric
substrate

<400> 71

tcactatagg aagag

15

<210> 72

<211> 36

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic chimeric
substrate

<220>

<223> Description of Combined DNA/RNA Molecule: Synthetic chimeric
substrate

<400> 72

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36

<210> 73

<211> 19

<212> DNA

<213> Artificial Sequence

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substrate

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<223> Description of Combined DNA/RNA Molecule: Synthetic chimeric
substrate

<400> 73

tcactataag aagagatgg

19

<210> 74

<211> 37

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic chimeric
substrate

<220>
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<400> 74
 acacatctct gaagtagcgc cgccgtatag tgacgct 37

<210> 75
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<220>
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 substrate

<220>
 <223> Description of Combined DNA/RNA Molecule: Synthetic chimeric
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<400> 75
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<210> 76
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<220>
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 substrate

<220>
 <223> Description of Combined DNA/RNA Molecule: Synthetic chimeric
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<400> 76
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<210> 77
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 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic chimeric
 substrate

<220>
 <223> Description of Combined DNA/RNA Molecule: Synthetic chimeric
 substrate

<400> 77
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<210> 78
<211> 29
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic chimeric
substrate

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic chimeric
substrate

<400> 78
cgcacctcc gagccggacg aagttactt 29

<210> 79
<211> 19
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic chimeric
substrate

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic chimeric
substrate

<400> 79
ctcactatag gaagagatg 19

<210> 80
<211> 41
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic chimeric
substrate

<220>
<223> Description of Combined DNA/RNA Molecule: Synthetic chimeric
substrate

<400> 80
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<210> 81
<211> 20
<212> DNA
<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic chimeric substrate

<223> Description of Combined DNA/RNA Molecule: Synthetic chimeric substrate

20

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic chimeric substrate

<223> Description of Combined DNA/RNA Molecule: Synthetic chimeric substrate

33

<213> Artificial Sequence

<223> Description of Artificial Sequence: Predicted secondary structure of the G3 deoxyribozyme

<223> variable nucleotide

[illegible]

<223> Description of Artificial Sequence: Co-DNA

[illegible]

??
??
??

23129464/v1